

# A new nasute termite from South India (Isoptera: Termitidae: Nasutitermitinae)<sup>1</sup>

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(With two plates)

While examining the unidentified termite collections from Tamil Nadu, I came across a vial, containing several soldiers and workers of a new species, which also proved to be a new genus (*vide infra* under affinities).

## *Alstonitermes*<sup>2</sup> gen. nov.

*Type-species: Alstonitermes flavescens* sp. nov.

### (a) Diagnostic characters:

1—IMAGO: Unknown.

#### 2. SOLDIER:

*General:* Head-capsule flavescent; rostrum pale reddish brown, darker basally.

*Head:* Head-capsule ampulaceous; distinctly wider than long (without rostrum); not constricted behind the antennae; sparsely pilose with small hairs and two long hairs one on either side on middle of head-capsule; rostrum short, conical, with a few hairs at the tip. *Antennae:* With 13-segments. *Mandibles:* Vestigial; outer margins without spinous processes. *Postmentum:* Club shaped; strongly convex laterally.

*Thorax:* *Pronotum:* Small, saddle shaped and sparsely hairy. *Mesonotum:* Narrower than pronotum. *Metanotum:* Broader than pronotum. *Legs:* Unusually elongated, femora slender; tibial spurs 2:2:2; tarsi 4-segmented.

*Abdomen:* Subglobular. Cerci 2-segmented.

#### 3. WORKER:

*General:* Head-capsule dark rusty brown, frons paler; antennae

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<sup>1</sup> Accepted April 1975.

<sup>2</sup> Named after the host, genus *Alstonia*.

pale yellow, becoming yellowish distally; legs and abdomen whitish yellow.

*Head*: Head-capsule subsquarish; wider than long; epicranial suture indistinct. *Fontanelle Plate*: Small, oval and submedially placed. *Antennae*: With 14-segments. *Clypeus*: Postclypeus swollen; length less than half its width. Anteclypeus trapezoid, translucent. *Mandibles*: Left mandible with an apical, two marginal teeth and a basal projection; apical subequal to 1st marginal tooth; angle between the apical and the 1st marginal very acute (c.  $50^\circ$ ); 1st marginal large and subtriangular; 2nd marginal small, triangular and widely separated from the 1st by a large wide sinuate border; basal projection large and broadly rounded. Right mandible also with an apical, two marginal teeth and a molar plate; apical acute, subequal to 1st marginal; 1st marginal triangular, with subequal anterior and posterior borders; 2nd marginal small, subtriangular; angle between the 1st and 2nd marginals deeply acute; its posterior border straight and twice its anterior border; molar plate with inner edge weakly concave, bifurcated.

*Thorax*: *Pronotum*: Saddle shaped; anterior lobe strongly upturned; anterior margin weakly to deeply notched in the middle. *Mesonotum*: and *Metanotum*: Broader than pronotum. *Legs*: Long, slender; tibial spurs 2:2:2; tarsi 4-segmented.

*Abdomen*: Subglobular. Cerci 2-segmented.

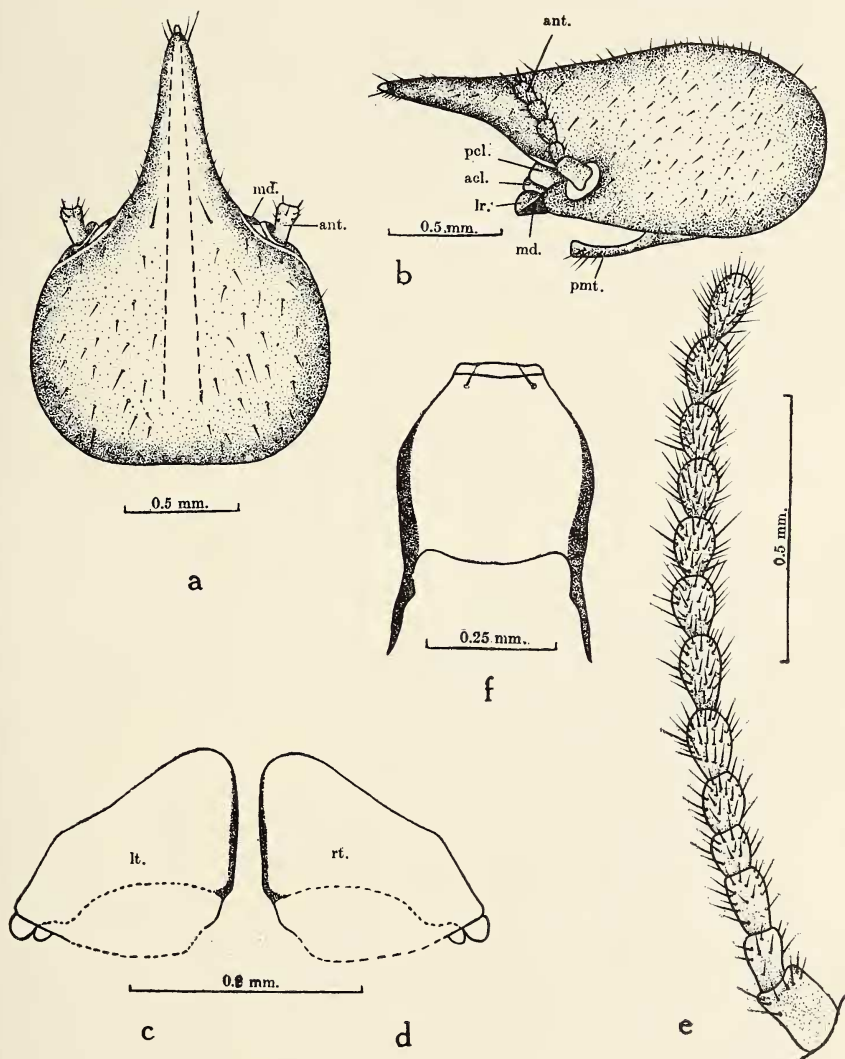
(b) *Affinities*:

The study of worker mandibles of this new genus leaves no doubt about its phylogenetic placement in the *paracornitermes* branch of the sub-family Nasutitermitinae, in which the imago-worker mandibles are characterised by (i) the posterior margin of the 1st marginal tooth of left mandible being undulating; (ii) the apical tooth being not much enlarged, without atrophy, degeneration or ultimate disappearance of any marginal tooth and (iii) the left mandibular index being generally low.

In these characters, it comes close to genus *Emersonitermes* Mathur et Sen-Sarma, however it differs from it as follows:

*Soldier*: (i) Head-capsule ampule shaped, distinctly broader than long (vs. pear shaped, distinctly longer than broad). (ii) Antennae 13-segmented (vs. 14-segmented). (iii) Rostrum short and conical (vs. long and awl shaped; rostrum—head index 0.52-0.60 vs. 0.86-0.89).

*Worker*: (i) Left mandibular index is distinctly lower (0.50 vs. 0.57). (ii) The angle between the 1st and 2nd marginals of right mandible distinctly acute (vs. obtuse in *Emersonitermes*); 2nd marginal more prominent and triangular; its posterior border straight. (iii) Antennae 14-segmented (vs. 13-segmented) and (iv) postclypeus less than half its width (vs. half its width).

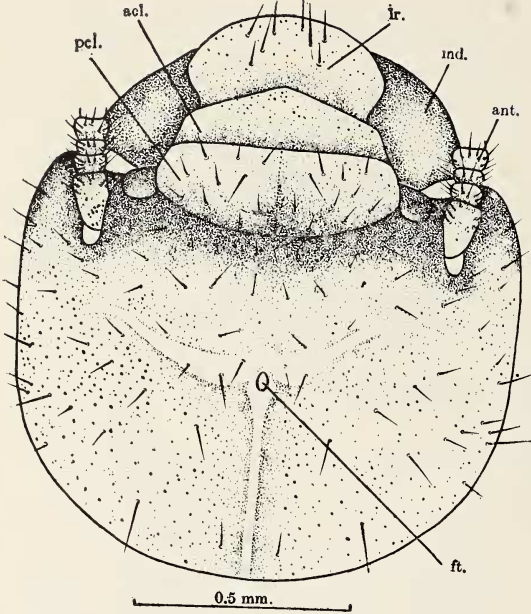


*Alstonitermes flavescens* sp. nov.

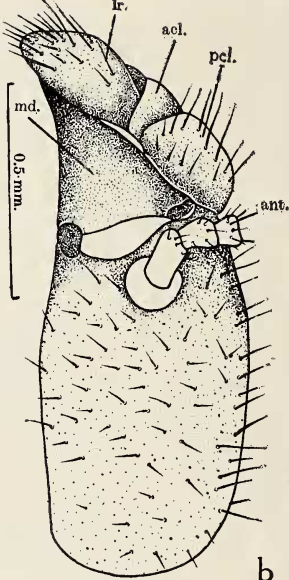
Caste: Soldier. (a) Head, Dorsal view; (b) Head, side view; (c) Left mandible;

(d) Right mandible; (e) Left antenna; (f) Postmentum.

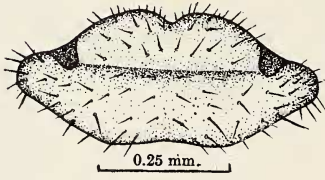
acl.—anteclypeus; ant.—antenna; lr.—labrum; lt.—left; md.—mandibles; pmt.—  
 postmentum; rt.—right.



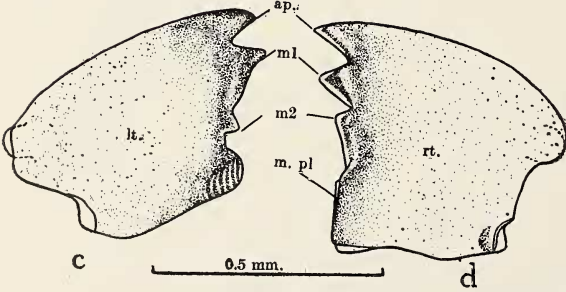
a



b

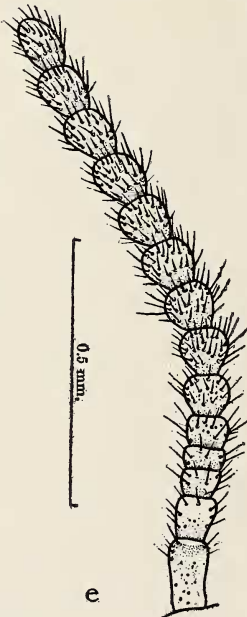


f



c

d



e

*Alstonitermes flavescens* sp. nov.

Caste: Worker. (a) Head, dorsal view; (b) Head, side view; (c) Left mandible; (d) Right mandible; (e) Right antenna; (f) Pronotum, dorsal view. acl.—anteclypeus; ant.—antenna; ap.—apical tooth of mandible; ft.—fontanelle; lr.—labrum; lt.—left; md.—mandibles; m1-m2.—1st-2nd marginal tooth of mandible; m.pl.—molar plate; pcl.—postclypeus; rt.—right.

**Alstonitermes flavescens** sp. nov.(a) *Material*:

One vial (M 15/ 11-xii-70), with several soldiers and workers from Kareeyan Shola forest, Top Slip, South Coimbatore Forest Division, Tamil Nadu, coll. M. L. Thakur, 11.xii.1970. *Ex. Alstonia scholaris*.

(b) *Description*:

1—IMAGO: Unknown.

2. SOLDIER: (Plate 1; Table 1).

*General*: Head-capsule creamy yellow, with a large elliptical whitish yellow portion near the posterior end of head-capsule; frons and anterior margin of pronotum dark rusty brown; rostrum reddish brown, slightly paler apically but darker basally; antennae yellowish brown, paler than rostrum but darker than head-capsule; rest of the body-parts whitish yellow; tibia darker than femora. Head-capsule and pronotum with scattered short hairs, body thickly pilose with long and short hairs.

*Head*: Head-capsule ampule shaped, distinctly wider than long (without rostrum); greatly swollen in the posterior half, gradually sloping in front; sides bulged out, not constricted behind the antennae; posterior margin depressed, almost straight in the middle. *Rostrum*: Short, conical, broader at base; with long hairs at tip. *Fontanelle*: Fontanelle gland and fontanelle tube indistinct. *Antennae*: Not markedly elongated; 13-segmented, pilose, pilosity increasing distally; segment 2 shorter than 3 but longer than 4; 3 almost twice as long as 4; 4th shortest; 5 longer than 6; 6-12 club shaped, distal segments becoming shorter; last ovate, subequal to penultimate. *Clypeus*: Postclypeus not clearly demarcated. Anteclypeus sugtrapezoid and whitish. *Labrum*: Dome shaped; broader than long, apilose. *Mandibles*: Vestigial, no spinous processes on outer margins; molar area brownish, substraight.

*Thorax*: *Pronotum*: Saddle shaped, much narrower than head-width (head—pronotum width index 0.38-0.46); anterior lobe weakly upturned; anterior margin semicircular, with an imperceptible median depression; posterior margin substraight. *Mesonotum*: Narrower than pronotum; posterior margin substraight. *Metanotum*: Broader than pronotum; posterior margin weakly convex. *Legs*: Unusually long; tibial spurs 2:2:2; tarsi 4-segmented.

*Abdomen*: Subglobular, densely covered with short hairs. Cerci 2-segmented; length c. 0.08 mm.

3. WORKER: (Plate 2; Table 2).

*General*: Head-capsule dark rusty brown, frons paler; labrum brownish; postclypeus and antennae pale yellow, becoming yellowish distally; legs and abdomen whitish yellow. Head-capsule sparsely, body densely hairy. Total body-length c. 4.00-4.50 mm.